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EXAMINER
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HANCE, ROBERT J

ART UNIT	PAPER NUMBER
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2421

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11/14/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/565,667	<b>Applicant(s)</b> ASHLEY, ALEXIS S.R.	
	<b>Examiner</b> ROBERT HANCE	<b>Art Unit</b> 2421	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Response to Arguments***

1. Applicant's arguments, see Remarks, filed 07/09/2008, with respect to claims 1, 2, 6, 31, 36, and 37 have been fully considered and are persuasive. The rejection of claims 1, 2, 6, 31, 36, and 37 has been withdrawn.

Applicant's arguments filed 07/09/2008 with respect to claim 22 have been fully considered but they are not persuasive.

Regarding Applicant's argument on page 11 of the Remarks that Deguillaume fails to disclose "extracting first data relating to a predetermined property of the media data stream," Examiner respectfully disagrees. Deguillaume discloses re-computing a signature from a data stream (Paragraphs 45-48). Since this signature is embedded within the video frames, and therefore part of the data stream, it follows that data relating to a predetermined property of the media stream is being extracted.

Regarding Applicant's argument on page 11 of the Remarks that Deguillaume fails to disclose "extracting second data relating to the predetermined property from the secured content identification data," Examiner respectfully disagrees. Deguillaume discloses extracting the encrypted embedded signature. Since this signature is embedded within the video frames, and therefore part of the data stream, it follows that data relating to a predetermined property of the media stream is being extracted.

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Regarding Applicant's argument on Page 11 of the Remarks that Deguillaume fails to disclose "comparing the first data and the second data . . ." because the signatures are not data related to a predetermined property of the media data stream, Examiner respectfully disagrees for reasons stated above.

### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

**Claim 37** is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claim 37 defines a computer

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program product embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., “When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized” – Guidelines Annex IV). That is, the scope of the presently claimed computer program product can range from paper on which the program is written, to a program simply contemplated and memorized by a person

**Claim 37** is also rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claim 37 defines a computer program product, distributable by electronic data transmission, which can be interpreted to be a signal. While “functional descriptive material” may be claimed as a statutory product (i.e., a “manufacture”) when embodied on a tangible computer readable medium, a signal embodying that same functional descriptive material is neither a process nor a product (i.e., a tangible “thing”) and therefore does not fall within one of the four statutory classes of § 101. Rather, “signal” is a form of energy, in the absence of any physical structure or tangible material.

**Claims 1-24 and 27-30** are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps or acts to be performed, a statutory “process” under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform

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underlying subject matter (such as an article or material) to a different state or thing (Reference the May 15, 2008 memorandum issued by Deputy Commissioner for Patent Examining Policy, John J. Love, titled "Clarification of 'Processes' under 35 U.S.C. 101"). The instant claims neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 22, 27-30 and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Deguillaume et al., US Pub No 2003/0070075.

**As to claim 22** Deguillaume et al. disclose a method of verifying the integrity of secured content identification data embedded in a media data stream, comprising the steps of: receiving a data stream of media content (content can be video - see claims 12-13) including embedded, secured content identification data, in which the secured content identification data incorporates data relating to a predetermined property of the media data stream (Paragraphs 40-42); extracting first data relating to a predetermined property of the media data stream (Paragraphs 45-48 - a signature is recalculated from the received data); extracting content identification data from the secured content

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identification data (Paragraphs 45-48 – content identification data is contained within the extracted watermark. See paragraphs 40-42); extracting second data relating to the predetermined property from the secured content identification data (Paragraphs 45-48 - the encrypted, embedded signature is extracted); comparing the first data and the second data to verify the authenticity of the extracted content identification data (Paragraph 46 – the computed signature is compared with the extracted signature, and  $A_T$  is the result of the comparison)

**As to claim 27** Deguillaume et al. discloses the method of claim 22 in which the media content comprises pictures, audio, video data streams (Paragraph 33, Claims 12-13).

**As to claim 28** Deguillaume et al. disclose the method of claim 22 in which the predetermined property is any property of the media data stream that changes from data frame to data frame (Paragraphs 40-42).

**As to claim 29** Deguillaume et al. disclose the method of claim 28 in which the predetermined property comprises frame size and frame hash (Paragraphs 40-42).

**As to claim 30** Deguillaume et al. disclose the method of claim 29 in which the predetermined property is a combination of frame size and frame hash (Paragraphs 40-42).

**As to claim 35** see similar rejection to claim 22. The method of claim 22 corresponds to the apparatus of claim 35. Therefore, claim 35 has been analyzed and rejected.

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***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-2, 6, 31 and 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Papagan et al., US Pub No 2002/0059604 in view of Penk et al., US Pub No 2003/0074670.

**As to claim 1** Papagan discloses a method for providing content identification within media data comprising the steps of inserting content identification data at regular intervals within media data (Paragraphs 27-29 – metadata (content identification) is inserted at every frame).

Papagan fails to disclose receiving a data stream of media content; and that the content identification is inserted within a media data stream.

However, in an analogous art, Penk discloses a broadcaster which receives a data stream of media content (Paragraph 41; Fig. 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Papagan with the teachings of Penk. In the combined system of Papagan and Penk, the data stored at the broadcaster (Papagan Fig. 3:311; Penk Fig. 2: 102) is a stored stream, therefore the content identification is inserted within a media data stream. The rationale for this modification would have



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been to enable the invention of Papagan to receive media content from a remote content provider.

**As to claim 2** the combined system of Papagan and Penk disclose the method of claim 1 wherein the content identification data is inserted every frame (Paragraph 29).

**As to claim 6** the combined system of Papagan and Penk disclose the method of claim 1 in which the media data stream may comprise any one or more of pictures and audio or video data streams (Paragraph 29).

**As to claims 31 and 36-37**, see similar rejection to claim 1. The method of claim 1 corresponds to the apparatus of claim 31 and the computer program products of claims 36-37. Therefore, claims 31 and 36-37 have been analyzed and rejected.

7. Claims 3 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Papagan and Penk as applied to claim 1 above, and further in view of Deguillaume.

**As to claim 3** the combined system of Papagan and Penk fail to disclose a method wherein the content identification data is digitally combined with a predetermined property of the data stream. However, in an analogous art, Deguillaume et al. disclose a method wherein the content identification data is digitally combined with a predetermined property of the data stream (Paragraph 40-42 - content identification data and hash data are input into a hash function).

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It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system of Papagan and Penk with the teachings of Deguillaume. The rationale for this combination would have been to create a more secure hash code that contains local contextual dependencies, thus making it more difficult to forge (Deguillaume Paragraph 40-42). All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

**As to claim 7** the combined system of Papagan, Penk and Deguillaume disclose a method in which the predetermined property is any property of the media data stream that changes from data frame to data frame (Deguillaume Paragraph 40 – the hash function takes as its input the data of local blocks of video (see claim 12-13), which by nature changes from frame to frame).

**As to claim 8** the combined system of Papagan, Penk and Deguillaume disclose a method in which the predetermined property comprises any one or more of: frame size, frame hash, transport stream identifier, clock signal, and continuity count (Deguillaume Paragraphs 40-42).

**As to claim 9** the combined system of Papagan, Penk and Deguillaume disclose a method in which the predetermined property is a combination of frame size and frame hash (Deguillaume Paragraphs 40-42).

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8. Claims 4-5 and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Papagan, Penk and Deguillaume as applied to claims 1 and 31 above, and further in view of Miettinen et al., US Pub No 2002/0138729.

**As to claim 4** Papagan et al. fail to disclose the method of claim 1 for providing tamper resistant content identification within the media data stream, in which the step of inserting content identification data comprises the further steps of: extracting data relating to a predetermined property of the media data stream; combining the extracted data with content identification data; applying a digital signature to the combined data; and inserting the combined data and digital signature as secured content identification data into the data stream.

However, in an analogous art, Deguillaume et al. disclose a method for providing tamper resistant content identification within the media data stream, in which the step of inserting content identification data comprises the further steps of: extracting data relating to a predetermined property of the media data stream (Paragraphs 40-42); combining the extracted data with content identification data (Paragraph 42 – unique image identification name or number, etc is included in the input to the hash function)

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the encryption method disclosed by Deguillaume et al. and insert the combined data and digital signature as secured content identification data into the data stream, as disclosed by Papagan et al. The rationale for this combination would have been to create a more secure hash code that contains local contextual dependencies,

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thus making it more difficult to forge (Deguillaume Paragraph 40-42). All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

Papagan et al. as modified by Deguillaume et al. fail to disclose applying a digital signature to the combined data. However, Miettinen et al. disclose applying a digital signature to a hash code (Paragraph 9). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the digital signature disclosed by Miettinen et al. in the system of Papagan et al. as modified. The rationale for this combination would have been to ascertain whether the data being sent had been modified (see Miettinen et al. Paragraph 9). All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

**As to claim 5** Papagan et al. fail to disclose the method of claim 4 in which the step of combining the extracted data with content identification data comprises the step of forming a hash code from the extracted data and the content identification data.

However, in an analogous art, Deguillaume et al. disclose forming a hash code from the extracted data and the content identification data (Paragraph 42).

**As to claim 32** see similar rejection to claim 4. The method of claim 4 corresponds to the apparatus of claim 32. Therefore claim 32 has been analyzed and rejected.

**As to claim 33** Papagan et al. fail to disclose the apparatus of claim 32 in which the means for combining includes a hash function generator for forming a hash code from the combined data, the encryption module applying the digital signature to the hash code.

However, in an analogous art Deguillaume et al. disclose a hash function generator for forming a hash code from the combined data (Paragraphs 40-42).

Papagan et al. as modified by Deguillaume et al. fail to disclose applying the digital signature to the hash code. However, in an analogous art Miettinen et al. disclose applying a digital signature to a hash code (Paragraph 9).

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Papagan, Penk, Deguillaume and Miettinen as applied to claim 1 above, and further in view of Everett, US Patent No 6,328,217.

**As to claim 10** the combined system of Papagan, Penk, Deguillaume and Miettinen fail to disclose the method of claim 5 in which the step of applying a digital signature to the hash code further includes applying digital signatures of the originator of the media data stream and a certification authority.

However, in an analogous art, Everett et al. disclose applying digital signatures of the originator of the media data stream and a certification authority (col. 6 lines 19-33).

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It would have been obvious to one of ordinary skill in the art at the time of the invention to use the signatures method disclosed by Everett et al. in the system of Papagan et al. as modified. The rationale for this combination would have been to assure the identity of the originator of the media data stream. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

10. Claims 11-16 and 34 rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al., US Patent No 6,963,972 in view of Deguillaume et al., US Pub No 2003/0070075, and further in view of Miettinen et al., US Pub No 2002/0138729.

**As to claim 11** Chang et al. disclose a method of transcoding a media data stream comprising the steps of: receiving a data stream of media content (col. 7 lines 39-58; Fig. 8); transcoding the media content of the data stream into a new format (col. 7 lines 39-58).

Chang et al. fail to disclose that the media stream includes embedded, secured content identification data, in which the secured content identification data incorporates data relating to a predetermined property of the media data stream; extracting data relating to a predetermined property of the media data stream in its new format; extracting content identification data from the secured content identification data; and combining the extracted data with the extracted content identification data.

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However, in an analogous art, Deguillaume et al. disclose a media stream that includes embedded, secured content identification data, in which the secured content identification data incorporates data relating to a predetermined property of the media data stream (Paragraphs 40-42); extracting data relating to a predetermined property of the media data stream (Paragraphs 40-42); extracting content identification data from the secured content identification data (Paragraphs 45-46 – the watermark, which contains content identification data, is decrypted and extracted); and combining the extracted data with the extracted content identification data (Paragraphs 40-42).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the encryption method disclosed by Deguillaume et al. in the transcoder disclosed by Chant et al. The rationale for this combination would have been to create a more secure hash code that contains local contextual dependencies, thus making it more difficult to forge (Deguillaume Paragraph 40-42). All of the functions disclosed by Deguillaume et al. could have been easily applied to the data stream after it was transcoded. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

Chang et al. as modified fail to disclose applying a digital signature to the combined data. However, in an analogous art, Miettinen et al. disclose applying a digital signature to a hash code (Paragraph 9). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the digital signature disclosed

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by Miettinen et al. in the transcoder of Chang et al. as modified. The rationale for this combination would have been to ascertain whether the data being sent had been modified (see Miettinen et al. Paragraph 9). Therefore it would have been obvious to insert the combined data (as disclosed by Deguillaume et al.) and digital signature (as disclosed by Miettinen et al.) as re-secured content identification data into the data stream. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

**As to claim 12** Chang et al. disclose a method in which the new format of the data stream has a lower resolution or transmission/storage bandwidth than the original format of the data stream (col. 1: 43-62).

**As to claim 13** Chang et al. disclose a method in which the media content may comprise audio and video data streams (col. 1:15-30).

**As to claim 14** Chang et al. fail to disclose the method of claim 11 in which the predetermined property is any property of the media data stream that changes from data frame to data frame. However, in an analogous art, Deguillaume et al. disclose the method of claim 11 in which the predetermined property is any property of the media data stream that changes from data frame to data frame (Paragraph 40-42).

**As to claim 15** Chang et al. fail to disclose the method of claim 14 in which the predetermined property comprises any one or more of: frame size, frame hash, transport stream identifier, clock signal, and continuity count. However, in an analogous



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art, Deguillaume et al. disclose the method of claim 14 in which the predetermined property comprises frame size and frame hash (Paragraph 40-42).

**As to claim 16** Chang et al. fail to disclose the method of claim 15 in which the predetermined property is a combination of frame size and frame hash. However, in an analogous art, Deguillaume et al. disclose the method of claim 15 in which the predetermined property is a combination of frame size and frame hash (Paragraphs 40-42).

**As to claim 34** see similar rejection to claim 11. The method of claim 11 corresponds to the apparatus of claim 34. Therefore, claim 34 has been analyzed and rejected.

11. Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al., US Patent No 6,963,972 in view of Deguillaume et al., US Pub No 2003/0070075, in view of Miettinen et al., US Pub No 2002/0138729 and further in view of Reeds et al., US Patent No 5,153,919.

**As to claim 17** Chang et al. as modified fail to disclose the method of claim 11 in which the step of applying a digital signature to the combined data further includes applying a digital signature of the transcoding device. However, in an analogous art Everett et al. disclose applying the digital signature of an intermediary device (col. 6 lines 19-22).

**As to claim 18** Chang et al. as modified fail to disclose the method of claim 17 in which the step of applying a digital signature to the combined data further includes the

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step of making available a corresponding public key of the transcoding device that is digitally signed by the originator of the content identification data. However, in an analogous art, Reeds et al. disclose making available the public key of a device that is digitally signed by the originator of the content identification data to prove to third parties that the device is authorized by the content provider (col. 2 lines 17-27).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the public key as disclosed by Reeds et al. in the transcoder of Chang et al. as modified. The rationale for this combination would have been to assure third parties that the transcoder is authorized by the content provider. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

12. Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al., US Patent No 6,963,972 in view of Deguillaume et al., US Pub No 2003/0070075, in view of Miettinen et al., US Pub No 2002/0138729 and further in view of McCormack et al., US Pub No 2004/0143836.

**As to claim 19** Chang et al. as modified fail to disclose the method of claim 11 in which the step of combining the extracted data with the extracted content identification data further includes the step of modifying the extracted content identification data.

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However, in an analogous art, McCormack et al. disclose updating meta data (i.e. content identification data) after transcoding (Paragraph 76).

It would have been obvious to one of ordinary skill in the art at the time of the invention to update the content identification data as disclosed by McCormack et al. in the transcoder of Chang et al. as modified. The rationale for this combination would have been to pass on updated meta data that reflects the changes made by the transcoder. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

**As to claim 20** Chang et al. as modified fail to disclose the method of claim 19 in which the step of modifying the extracted content identification data comprises including an indication of the new format of the transcoded data stream. However, in an analogous art, McCormack et al. disclose including in the updated content identification data an indication of the new format of the transcoded data stream (Paragraph 76).

**As to claim 21** Chang et al. as modified fail to disclose the method of claim 19 in which the step of modifying the extracted content identification data comprises including an identity of a device performing the transcoding. However, in an analogous art, McCormack et al. disclose including the identify of the transcoding device in the updated meta data (Paragraph 76).

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13. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Deguillaume et al., US Pub No 2003/0070075 in view of Miettinen et al., US Pub No 2002/0138729.

**As to claim 23** Deguillaume et al. fail to disclose the method of claim 22 in which the step of extracting content identification data from the secured content identification data comprises the steps of: obtaining a public key of a content provider that secured the content identification data; and verifying an encrypted signature of the content provider using the public key. However, in an analogous art, Miettinen et al. disclose a method in which the step of extracting content identification data from the secured content identification data comprises the steps of: obtaining a public key of a content provider that secured the content identification data; and verifying an encrypted signature of the content provider using the public key (Paragraph 9).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the public key disclosed by Miettinen et al. in the method of Deguillaume et al. The rationale for this combination would have been to verify that the received data is unchanged and that it has been sent by the content provider. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

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14. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Deguillaume et al., US Pub No 2003/0070075 in view of Miettinen et al., US Pub No 2002/0138729 and further in view of Everett et al., US Patent No 6,328,217.

**As to claim 24** Deguillaume et al. as modified fail to disclose the method of claim 23 in which the step of extracting content identification data from the secured content identification data comprises the steps of: obtaining a public key of a certification authority; verifying the authenticity of the public key of the content provider using the public key of the certification authority. However, in an analogous art, Everett et al. disclose obtaining a public key of a certification authority; verifying the authenticity of the public key of the content provider using the public key of the certification authority (col. 6 lines 19-33).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the public key of a certification authority as disclosed by Everett et al. in the method of Deguillaume et al. as modified. The rationale for this combination would have been to verify that the source of the data is trustworthy. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

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15. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Deguillaume et al., US Pub No 2003/0070075 in view of Chang et al., US Patent No 6,963,972 and further in view of Reeds et al., US Patent No 5,153,919.

**As to claim 25** Deguillaume et al. fail to disclose the method of claim 22 in which the media data stream is received via a transcoding device, and in which the step of extracting content identification data from the secured content identification data comprises the steps of verifying that the transcoder device was authorised to modify the data stream by an originator of the content identification data.

However, in an analogous art, Chang et al. disclose that the media data stream is received via a transcoding proxy device (col. 7 lines 39-58, Fig. 8)

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a transcoding device as disclosed by Chang et al. in the encryption scheme disclosed by Deguillaume et al. The rationale for this combination would have been to change the format of data when necessary. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

Deguillaume et al. as modified by Chang et al. fail to disclose verifying that the transcoder device was authorised to modify the data stream by an originator of the content identification data. However, in an analogous art, Reeds et al. disclose making available the public key of a device that is digitally signed by the originator of the

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content identification data to prove to third parties that the device is authorized by the content provider (col. 2 lines 17-27).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the digital signature disclosed by Reeds et al. in the transcoder of Deguillaume et al. as modified by Chang et al. The rationale for this combination would have been to assure that the transcoder is trustworthy. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

16. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Deguillaume et al., US Pub No 2003/0070075 in view of Reeds et al., US Patent No 5,153,919 in view of Chang et al., US Patent No 6,963,972 and further in view of Miettinen et al., US Pub No 2002/0138729.

**As to claim 26** Deguillaume et al. as modified by Chang et al. fail to disclose the method of claim 25 in which the step of extracting content identification data from the secured content identification data comprises the steps of: obtaining a public key of the transcoding device that secured the content identification data, the public key being digitally signed by the originator of the content identification data; obtaining a public key of the originator; verifying an encrypted signature of the originator using the public key of the originator, and thereby verifying the public key of the transcoder device; verifying

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the content identification information using the verified public key of the transcoder device.

However, in an analogous art Reeds et al. disclose obtaining a public key of the transcoding device that secured the content identification data, the public key being digitally signed by the originator of the content identification data (col. 2 lines 17-28).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the digital signature disclosed by Reeds et al. in the transcoder of Deguillaume et al. as modified by Chang et al. The rationale for this combination would have been to assure that the transcoder is trustworthy. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

Deguillaume et al. as modified by Chang et al. and Everett et al. fail to disclose obtaining a public key of the originator; verifying an encrypted signature of the originator using the public key of the originator, and thereby verifying the public key of the transcoder device; verifying the content identification information using the verified public key of the transcoder device.

However, in an analogous art, Miettinen et al. disclose obtaining a public key of the originator; verifying an encrypted signature of the originator using the public key of the originator; verifying the content identification information using the verified public key of the transcoder device (Paragraph 9).



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It would have been obvious to one of ordinary skill in the art at the time of the invention to use the digital signature disclosed by Miettinen et al. and thereby verify the public key of the transcoder device of Deguillaume et al. as modified. The rationale for this combination would have been to ascertain whether the data being sent had been modified (see Miettinen et al. Paragraph 9). All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT HANCE whose telephone number is (571)270-5319. The examiner can normally be reached on M-F 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/John W. Miller/  
Supervisory Patent Examiner, Art Unit 2421

ROBERT HANCE  
Examiner  
Art Unit 2421

/ROBERT HANCE/  
Examiner, Art Unit 2421